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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,405	12/12/2005	Isabelle Chartier	034299-678	5533

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EXAMINER

WARD, JESSICA LEE

ART UNIT	PAPER NUMBER
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1733

MAIL DATE	DELIVERY MODE
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08/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/560,405

Applicant(s)

CHARTIER ET AL.

Examiner

Jessica L. Ward

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/29/06.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roitman et al. (US 2003/0017305) in view of Sasaki et al. ("Screen Printed Adhesive Technologies for All-Silicon Optical Packaging" – listed in IDS) and/or Ringleben et al. (US 2005/0173059) and/or Khan et al. (US 2004/0020595).

As to claim 1, Roitman teaches a process for gluing at least one micro-structured substrate (250) comprising upper coplanar plane areas and recesses (260) in between them (Figures 7B; section [0075]- first sentence in section [0077]), by means of a glue (270) that can bond to these upper coplanar plane areas. The reference appreciates that a variety of techniques can be used to deposit the glue on the upper coplanar plane areas, including screen printing (section [0080], section [0085]). And, one of ordinary skill in the art would readily appreciate that screen printing is characterized by the use of a screen/stencil (= grid) to deposit adhesive in select locations where the adhesive is forced through openings in the screen/stencil by a tool that presses on the screen/stencil, as evidenced by Sasaki (Figure 2) and/or Ringleben (Figure 15; section [0037]) and/or Khan (Figure 5; section [0020]).

Before depositing the adhesive, Roitman modifies the surface of the upper coplanar plane areas using plasma treatment (section [0084]). And, one having ordinary skill in the art would

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readily appreciate it being well established in the art to use plasma treatment as a means for adapting the wettability of a surface to the material being applied thereto (it being noted that plasma treatment is also the present invention's treatment of choice – p. 13, lines 1-7).

However, it is unclear as to whether the screen/stencil/grid contacts the upper coplanar plane areas of Roitman. The teachings of Sasaki (Figure 2) and/or Ringleben (Figure 15; section [0037]) and/or Khan (Figure 5; section [0020]) also provide evidence that it is known in the art to contact the surface of a substrate, be it flat or micro-structured, with a screen/stencil/grid when using a screen printing technique to deposit adhesive in select locations on the surface of the substrate. Therefore, it would have been obvious to one of ordinary skill in the art to contact the upper coplanar plane areas of Roitman with the screen/stencil/grid when depositing the glue because such is known in the art, as taught by Sasaki and/or Ringleben and/or Khan, where this allows for more accurate deposition of the glue and hence decreased probability that some of the glue will end up in the channels.

As to claim 2, one would readily appreciate it being well known and conventional in the screen printing art to use a doctor blade or knife to press on the grid, as evidenced by Sasaki (Figure 2) and/or Ringleben (Figure 15; section [0037]) and/or Khan (Figure 5; section [0020]).

As to claim 3, one would readily appreciate that the plasma treatment of Roitman, like that of the present invention, would control spreading of the glue.

As to claim 4, Roitman teaches closing the micro-structured substrate (250) with a closing substrate (255) that is fixed to the upper coplanar plane areas by the glue (Figure 7B; sections 0075-0076)).

As to claim 10, Roitman teaches such (sections [0075-0076]).

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3. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roitman et al. in view of Sasaki et al. and/or Ringleben et al. and/or Khan et al. as applied to claim 4 above, and further in view of Eisenbeiss et al. (US 2005/0077175).

As to claim 5-6, providing biological probes in recesses of the micro-structured substrate would have been within purview of one having ordinary skill in the art depending on the intended use of the finished product. However, placement of devices (i.e. probes) within the recesses is well known and conventional in the art, as evidenced by Eisenbeiss (section [0032]), and therefore would have been obvious.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roitman et al. in view of Sasaki et al. and/or Ringleben et al. and/or Khan et al. as applied to claim 4 above, and further in view of Soane et al. (US 6176962).

As to claim 7, it would have been obvious to provide the closing substrate with drillings through which fluid will be added into the recesses in the micro-structured substrate of Roitman because such is known in the art, as taught by Soane (Figures 5-6; column 5, lines 46-50).

5. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roitman et al. in view of Sasaki et al. and/or Ringleben et al. and/or Khan et al. as applied to claim 4 above, and further in view of Lum et al. (US 5932315).

As to claims 8-9, it would have been obvious to form a plurality of bonded micro-structured and closing substrates by bonding one, large micro-structured substrate to one, large closing substrate and then separating the large, bonded substrates into a plurality of smaller, bonded substrates because such is known in the art, as taught by Lum (column 7, lines 36-41),

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where this allows for mass production of the bonded substrates and hence decreased production time.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessica L. Ward whose telephone number is 571-272-1223. The examiner can normally be reached on Mon-Fri between 9AM and 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard D. Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jessica L. Ward
Primary Examiner
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